

WHAT IS CLAIMED IS:

1 1. A radio access network comprising:

2 plural radio network controllers including a first radio network controller, the
3 plural radio network controllers being situated to establish one or more overlapping
4 routing areas, each overlapping routing area comprising a cell controlled by the first
5 radio network controller and at least one cell controlled by another of the plural radio
6 network controllers;

7 wherein for signaling the first radio network controller need only store network
8 addresses for:

9 any of the plural radio network controllers which controls a cell in any
10 overlapping routing area; and

11 any of the plural radio network controllers which functions as a serving
12 radio network controller for a connection for which the first radio network controller
13 functions as a drift radio network controller.

1 2. The apparatus of claim 1, further comprising a signaling network connecting
2 the plural radio network controllers, wherein one of the plural radio network controllers
3 is a serving radio network controller which controls a connection between a core
4 network and a user equipment unit, wherein when the user equipment unit moves from a
5 first routing area to a second routing area, the second routing area being an overlapping
6 routing area in which a second radio network controller also controls cells, the first
7 radio network controller sends, in a signaling message to a serving radio network
8 controller, both (1) an address of the first radio network controller, and (2) the address
9 of the second radio network controller, thereby enabling the serving radio network
10 controller to page the user equipment unit throughout the overlapping routing area.

1 3. A radio network controller for a radio access telecommunications network
2 which uses, as criteria for which other radio network controllers to store addresses,
3 only:

4 those other radio network controllers which controls cells in overlapping routing
5 area(s), the overlapping routing area(s) also having at least one cell controlled by the
6 radio network controller; and

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those other radio network controllers which function as a serving radio network controller for a connection for which the radio network controller functions as a drift radio network controller.

4. The apparatus of claim 3, wherein when the radio network controller serves as a drift radio network controller, and wherein when an user equipment unit moves from a first routing area to a second routing area, the second routing area being an overlapping routing area, the radio network controller sends, in a signaling message to a serving radio network controller, both (1) an address of the radio network controller, and (2) the address of any other radio network controller having cells in the overlapping routing area, thereby enabling the serving radio network controller to page the user equipment unit throughout the overlapping routing area.

5. A method of operating a radio access network comprising:
providing plural radio network controllers;
providing one or more overlapping routing areas, each overlapping routing area comprising a cell controlled by a first radio network controller and a cell controlled by another of the plural radio network controllers;
regarding addresses of other radio network controllers in the radio access network, requiring the first radio network controller, for signaling purposes, only to store network addresses for:

any of the plural radio network controllers which controls a cell in the one or more overlapping routing area;

any of the plural radio network controllers which functions as a serving radio network controller for a connection for which the first radio network controller functions as a drift radio network controller.

6. The method of claim 1, wherein one of the plural radio network controllers is a serving radio network controller which controls a connection between a core network and a user equipment unit, wherein when the user equipment unit moves from a first routing area to a second routing area, the second routing area being an overlapping routing area in which a second radio network controller also controls cells, the method further comprising:

7 the first radio network controller sending, in a signaling message to a serving
8 radio network controller, both (1) an address of the first radio network controller, and
9 (2) the address of the second radio network controller, thereby enabling the serving
10 radio network controller to page the user equipment unit throughout the overlapping
11 routing area.

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